

Claims

What is Claimed is:

- 5 1. A cathodic electrodeposition coating composition which produces substantially pinhole-free coatings on galvanized surfaces,
 said composition comprising 0.2 to 8% by weight, based on the weight of resin solids in the composition, of at least one 5- or 6-membered cyclic imide having a (cyclo)alkyl or (cyclo)alkenyl residue comprising 4 to
10 12 carbon atoms on the imide nitrogen.
2. The cathodic electrodeposition coating composition of claim 1, wherein the cyclic imide is the reaction product of a cyclic carboxylic anhydride and an aliphatic amine.
- 15 3. The cathodic electrodeposition coating composition of claim 2, wherein the cyclic imide is the reaction product of dodecenylsuccinic anhydride with 2-ethylhexylamine.
- 20 4. A process for the cathodic electrodeposition coating of a substrate having an at least partially galvanized surface, the process comprising the step of applying a cathodic electrodeposition coating composition to the at least partially galvanized surface, wherein the coating composition
 comprises 0.2 to 8% by weight, based on the weight of resin solids in the
25 composition, of at least one 5- or 6-membered cyclic imide having a (cyclo)alkyl or (cyclo)alkenyl residue comprising 4 to 12 carbon atoms on the imide nitrogen.
5. The process of claim 4, wherein the substrate having an at least
30 partially galvanized surface is selected from the group consisting of metallic substrates and composite constructions thereof.

6. The process of claim 5, wherein the substrate comprises galvanized steel.
- 5 7. The process of claim 6, wherein the substrate is selected from the group consisting of automotive bodies and automotive body parts.
8. A process for making substantially pinhole-free coatings on substrates having an at least partially galvanized surface, the process
10 comprising applying a cathodic electrodeposition coating composition to the at least partially galvanized surface, wherein the coating composition comprises 0.2 to 8% by weight, based on the weight of resin solids in the composition, of at least one 5- or 6-membered cyclic imide having a (cyclo)alkyl or (cyclo)alkenyl residue comprising 4 to 12 carbon atoms on
15 the imide nitrogen.
9. A substrate coated with the cathodic electrodeposition coating composition according to the process of claim 4.
- 20 10. The substrate of claim 9 selected from the group consisting of automotive bodies and automotive body parts.